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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/025,014

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Holger Janssen

1882

3598

7590 02/12/2007
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EXAMINER

SENFİ, BEHROOZ M

ART UNIT

PAPER NUMBER

2621

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

02/12/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/025,014

Applicant(s)

JANSSEN, HOLGER

Examiner

Behrooz Senfi

Art Unit

2621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 26-50 is/are pending in the application.
- 4a) Of the above claim(s) 1-25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 26-50 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 26 – 28, 30 – 31 and 45 - 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heimann et al (US 5,948,042) in view of Tanaka (US 6,470,265).

Regarding claim 26, Heimann '042 teaches, "a method of producing road or street section data for a digital map" (i.e. fig. 1) comprising, "providing a vehicle with an image producing device and position determining device" (i.e. vehicle 11 with video camera, col. 4, lines 38 – 39 and GPS) and "means for generating image data of surroundings of the vehicle and position determining device, means for generating position of the vehicle" (i.e. abstract, col. 6, lines 25+, col. 2, lines 55 – 60) and "driving the vehicle over at least one road" (i.e. abstract, lines 12 - 13), and "during the driving of the vehicle, simultaneously collecting image data with the image producing device" (i.e. col. 6, lines 27 - 65) and "analyzing the image data with an image processing means to

Art Unit: 2621

put together or assemble a road or street section description (fig. 1, traffic computer and processor, col. 6, lines 26 – 37) and “correlating the vehicle position data and the road or street section description with a correlation means” reads on GPS to determine the actual position of the vehicle for updating the digital map (col. 5, lines 23 – 35).

Heimann '042 teaches, the use of the camera which is installed in a vehicle for taking images and registering the traffic signs (lane guidance) arranged on a road sections and crossings and junctions, by evaluating the image data. But is silent in regards to image data includes “at least one of cycle lane information, road construction information”.

Tanaka in the same field (i.e. figs. 5 and 9, abstract, col. 7, lines 3 - 30) teaches recognizing construction, repair, removal, etc. of the roads and buildings and updating map based on the information.

In view of the above, it would have been obvious to one having ordinary skill in the art at the time of the information was made to improve the image analyzing system of Heimann in accordance with teaching of Tanaka to obtain accurate road map data by using data which can be obtained easily and frequently and use the obtained data effectively, as suggested by Tanaka (col. 2, lines 25 – 31).

Regarding claim 27, the limitation “vehicle absolute position and orientation” (Heimann; GPS, col. 5, lines 23 – 36).

Regarding claim 28, GPS inherently utilizes a coordinate system and information collected from GPS is used to point to location of vehicle relative to digital map,

Art Unit: 2621

therefore the GPS coordinate system is coincidence with the digital map, as discussed in claim 27.

Regarding claim 30, combination of Heimann and Endo teaches, "comparing the road or street section data with pre-existing road or street data and updating" (Heimann; col. 3, lines 18 – 20, and col. 6, lines 1 – 3 of Heimann).

Regarding claim 31, the limitations "transmitting the contingent deviations or the road or street section data" (Heimann; fig. 2, data transmission section, and also Tanaka; fig. 1).

Regarding claims 45 - 46, the limitations "image producing device comprises at least one camera" (Heimann; col. 4, lines 37 – 38).

Regarding claim 47, the limitations "stereoscopic image-generating device" (Tanaka; abstract, col. 6, lines 23 – 25 and 57 – 58).

Regarding claim 48, the limitations claimed have been analyzed and rejected with respect to claim 26 above.

4. Claims 29, 32 – 44 and 49 - 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heimann '042 in view of Tanaka (US 6,470,265) further in view of Kawai et al (US 6,577,334).

Regarding claim 32, combination of Heimann and Tanka teaches, "a method of producing road or street section data for a digital map and providing a vehicle with an image producing device, and generating image data of surroundings of the vehicle and position determining device for generating position of the vehicle and analyzing the image data, including at least one of road construction information and cycle lane

Art Unit: 2621

information and correlating the vehicle position data” as discussed with respect to claim 26 above.

Heimann '042 is silent in regards to explicit of “course of the at least one road or street section relative to the vehicle, a spacing between a vehicle longitudinal axis and a street or road edge”.

Kawai '334 in the same field (figs. 9, 11a - 12c and 22) teaches the above subject matter.

In view of the above, it would have been obvious to one having ordinary skill in the art at the time of the information was made to improve the image analyzing system of Heimann, by more particularly analyzing the collected information from the image to determine the vehicle position as suggested by Kawai.

Regarding claim 33, the limitations “vehicle absolute position and orientation” (Heimann; GPS, col. 5, lines 23 – 36 of also Kawai; col. 6, lines 60 – 65 of Kawai).

Regarding claim 34, GPS inherently utilizes a coordinate system and information collected from GPS is used to point to location of vehicle relative to digital map, therefore the GPS coordinate system is coincidence with the digital map, as discussed in claim 27 above.

Regarding claim 35, the limitations claimed have been analyzed and rejected with respect to claim 32 above.

Regarding claims 36 and 29, the limitation “wherein the road or street section data includes a statement regarding a course of at least one road or street section in relation to the fixed first coordinate system” (Kawai; col. 5, lines 39 – 54).

Regarding claim 37, the limitations “comparing the road or street section data with pre-existing road or street data and updating” (Heimann; col. 3, lines 18 – 20, and col. 6, lines 1 – 3).

Regarding claim 38, the limitations “transmitting the data ” (Heimann; fig. 2, data transmission section, and also Tanaka; fig. 1).

Regarding claims 39 - 40, the limitations “image producing device comprises at least one camera” (Heimann col. 4, lines 37 – 38).

Regarding claim 41, the limitations “stereoscopic image-generating device” (Tanaka; abstract, col. 6, lines 23 – 25 and 57 – 58).

Regarding claim 42 the limitations claimed are substantially similar to claim 32, therefore the ground for rejecting claim 32 also applies here. As for additional limitation, “comparing the road or street section data with pre-existing road or street data” please see (Heimann; col. 3, lines 18 – 20, and col. 6, lines 1 – 3).

Regarding claim 43, the limitations “communication means” (i.e. fig. 2, data transmission section and exchange of information” (Heimann; col. 1, lines 20 – 22).

Regarding claim 44, the limitation “interface device for supplying the vehicle position data and road or street section information obtained from the image data” would have been implied and necessitated by the traffic processor 20 of Heimann and also communication system of Tanaka.

Regarding claim 49, the limitations “newly constructed roads or street sections” (Tanaka; col. 7, lines 50 – 52).

Art Unit: 2621

Regarding claim 50, the limitations "constructing data regarding permanent or temporary changes in course of the at least one road or street section due to construction" (Tanaka; col. 7, lines 49 – 53).

Contact

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Behrooz Senfi** whose telephone number is **(571) 272-7339**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Mehrdad Dastouri** can be reached on **(571) 272-7418**.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231


Or faxed to:

(571) 273-8300

Hand-delivered responses should be brought to Randolph Building, 401 Dulany Street, Alexandria, Va. 22314.

Any inquiry of a general nature or relative to the status of the application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is **(571) 272-6000**.

B. M. S.


TUNG VO
PRIMARY EXAMINER